REMARKS

In accordance with the foregoing, claims 1, 9, 33 and 39 have been amended. Claims 1, 2, 4-7, 9, 10, 12-15, 17-23, 25-29, and 31-41 are pending and under consideration. Reconsideration is respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 2, 4-7, 9, 10, 12-15, 17-23, 25-29, and 31-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohta (U.S. Patent No. 6,980,319) and Torikai (Japanese Publication No. 10-091375) and Mazzagatte et al. (U.S. Patent No. 7,454,796) further in view of Hayashi (U.S. Patent No. 7,089,321). As discussed below, Applicant submits that the cited references, taken alone or in combination, do not teach or suggest all of the features of the rejected claims.

Claim 1 has been amended to recite "extracting information from a Media Access Control frame of the at least one printing client that is associated with a Basic Service Set, which includes the wireless LAN printer as a master of the Basic Service Set, the extracted information being information specifying whether the at least one printing client is authenticated to receive services of the wireless LAN printer; forming a list of the at least one printing client by using a Media Access Control address of the Media Access Control frame as an index, the list reflecting a state of the at least one printing client in relation to the wireless LAN printer; and managing printing operations of the at least one printing client according to the list by permitting only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer, wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes, and wherein the at least one printing client is a personal computer, a personal digital assistant, or a cellular phone, that includes a wireless Local Area Network functionality, wherein the Basic Service Set, including the wireless LAN printer as the master, further includes the only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer as other members of the Basic Service Set."

Thus, none of cited references discloses the feature of claim 1.

For example, claim 1 recites "managing printing operations of the at least one printing client according to the list by permitting only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer... ." The office Action acknowledged that Ohta does not disclose this feature (Office Action, page 8, lines 14-18). The Office Action also apparently acknowledged that Torikai does not disclose this feature (Office Action, page 8, lines 14-18), but at the same time apparently asserted that Torikai compensates for this deficiency (Office Action, "Response to Arguments," page 2, line 16 to page 3, line 3). The

Office Action finally asserted that Mazzagatte et al. compensates for this deficiency of Ohta and/or Torikai (Office Action, page 9, lines 3-6).

Torikai states that a network printer "has [a] priority table 6 which sets up printing priority for every MAC address of a high order host" (second sentence of Paragraph [0021]). Torikai further states that the network printer has "a sequence control means 100 to register the MAC address ... according to the priority" (third sentence of Paragraph [0021]). Applicant submits that Torikai discloses a prioritizing of print requests, but does not disclose any authentication step and thus does not disclose "permitting only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer" as recited by claim 1.

In Mazzagatte et al., a computer and printer may communicate via a wireless connection (Mazzagatte et al., column 11, lines 58-62) and control of a printing device is obtained in conjunction with authentication where control is obtained after a successful authentication process (Mazzagatte et al., column 11, lines 40-47). If the user sending the print job wants the print job to only be printed out after the recipient has been authenticated at the printer, the sender selects an authentication mode (Mazzagatte et al., column 12, lines 32-34). If the print job is an authenticated print job, print data is submitted along with user identification information, such as a user's biometric information (Mazzagatte et al., column 12, lines 45-51). The identification information links the print job to the intended recipient so that only the intended recipient is able to print the print job (Mazzagatte et al., column 12, lines 51-53). The identification information may be the recipient's name, city, etc (Mazzagatte et al., column 12, lines 53-56). Then the recipient is physically authenticated at the image forming device by a biometric device (Mazzagatte et al., column , lines 63-66). A smart card at the sending computer 10 may contain the intended recipient's unique identification information (Mazzagatte et al., column 13, lines 5-8).

Mazzagatte et al. further discusses that the authenticated print job is submitted for printing from the sending node and is submitted to a print queue contained within server 540 (Mazzagatte et al., column 13, lines 31-34). After the authenticated print job has been submitted by the sending node, the print job is received and stored, a determination is made as to whether the received print job is an authenticated print job and whether or not the recipient has been authenticated, and if the recipient has been authenticated, the print job is printed (Mazzagatte et al., column 13, lines 41-46 and column 13, line 66 to column 14, line 1).

First, Mazzagatte et al. does not discuss or suggest that extracted information is information specifying whether the at least one printing client is authenticated to receive services of a wireless LAN printer. Mazzagatte et al. is only concerned with the authentication of the recipient, who is a physical person and not a printing client, which one of ordinary skill in the art knows to be a processing device, for example. In particular, Fig. 1 of the present application shows that typical printing clients 20 are, for example, a PC 22, a laptop 24, a PDA 26 or a cellular phone 28. The printing clients are not, however, people or recipients. Mazzagatte specifically discusses that the recipient is authenticated at the image forming device by, for example, a biometric device. Thus, it is a person who is authenticated and not a printing client. Further, in the present invention of claim 1, for example, the printing client is not a person, but is a personal computer, a personal digital assistant, or a cellular phone, that includes a wireless Local Area Network functionality.

Further, Mazzagatte does not suggest that only printing clients authenticated to receive services of the wireless LAN printer are permitted to associate with the wireless LAN printer. As discussed at col. 13, lines 30-34, for example, Mazzagatte et al. specifically discusses that the authenticated print job is submitted for printing from the sending node. Thus, Mazzagatte et al. specifically discusses associating the sending node with the printing device **before** any authentication process has occurred. Even assuming, *arguendo*, that the recipient information, such as the recipient's name, could be construed to be information specifying whether a printing client is authenticated to receive services of a wireless printer, the authentication process occurs after the sending node has transmitted the print job to the printer. Thus, Mazzagatte et al. does not suggest that only printing clients that are authenticated to receive services of a wireless printer are permitted to associate with the wireless printer. Mazzagatte et al. clearly shows that the sending node is permitted to associate with the wireless printer (because otherwise the sending node would not be able to transmit the printing information to the printer) prior to any authentication process. Additionally, as discussed above, the authentication process is for the recipient who is a person and is not for a printing client (such as a sending node) that wishes to associate with the printer.

As discussed at paragraphs [0008]-[0009] of the present specification, if a wireless LAN printer is included in a basic service set, association with the wireless LAN printer is limited to approximately ten printing clients. On the other hand, printing clients that have not been authenticated to receive services of the wireless LAN printer are able to associate with the wireless LAN printer. Thus, because the number of printing clients allowed to associate with the wireless printer is limited, the printing clients that have been authenticated to receive services of the wireless LAN printer are unable to associate with the wireless printer due to the presence of non-authenticated printing clients.

Thus, the present invention only allows printing clients to associate with the wireless printer who have been authenticated to avoid having non-authenticated printing clients limit the number of printing clients that are able to associate with the printer.

Mazzagatte et al. does not suggest that it is a printing client that is authenticated so that only printing clients that have already been authenticated are allowed to associate with the printer. As Mazzagatte et al. discusses that the sending node is able to associate with the printer regardless of whether the sending node (and not the print job recipient) is authenticated, then Mazzagatte et al. does not suggest permitting only printing clients (e.g., a personal computer, a personal digital assistant, or a cellular phone) authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer.

The apparent reason cited by the Examiner of "remotely obtaining exclusive control of a device by remotely establishing communication with the device over a network, requesting to obtain remote exclusive control of the device's capabilities, and determining whether remote exclusive control of the device's capabilities can be obtained based on whether or not another user already has exclusive control of the device's capabilities" does not suggest why one of ordinary skill in the art would only allow printing clients that are authenticated to receive services of a wireless printer to associate with the printer. In particular, the cited apparent reason only suggests why an intended recipient of the print job would want exclusive control of a printing device, but not why only printing clients (i.e., those who would transmit the print job) who have been authenticated to receive services of the printer would be permitted to associate with the printer. The apparent reason does not have a rational underpinning in relation to the present invention of claim 1, for example, because the apparent reason does not specify why exclusive control by an intended recipient is beneficial in a system in which a printing client would be authenticated to receive services of a wireless printer.

Further, the apparent reason provides no support for limiting an association of particular printing clients to the wireless printer. As Mazzagatte et al. is only related to authenticating an intended recipient, but is not related to authenticating a printing client, then Mazzagatte et al. does not suggest permitting only particular printing clients to associate with the printer.

In addition, nothing has been cited or found in Hayashi to compensate for this deficiency in Ohta, Torikai and Mazzagatte et al.

Furthermore, claim 1 recites

> extracting information from a Media Access Control frame of the at least one printing client that is associated with a Basic Service Set, which includes the wireless LAN printer, the extracted information being information specifying whether the at least one printing client is authenticated to receive services of the wireless LAN printer

The Office Action acknowledged that Ohta and Torikai do not disclose "the extracted information being information specifying whether the at least one printing client is authenticated to receive services of the wireless LAN printer," but alleges that Mazzagatte et al. compensates for this deficiency.

However, as discussed above, Mazzagatte et al. discloses an authenticated print recipient, not an authenticated printing client. In addition, nothing has been cited or found in Hayashi to compensate for this deficiency in Ohta, Torikai and Mazzagatte et al.

In addition, claim 1 recites "wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes."

Hayashi discloses "with this embodiment, the request signals constituting request data from the wireless client devices 2 and 3 are also transmitted in packets each laid out in a predetermined manner. FIG. 5 is an explanatory view depicting a typical layout of a packet in which the wireless client device 2 or 3 transmits a request signal" (see col. 10, lines 27-33 and FIG. 5 of Hayashi).

However, the cited portions of Hayashi merely disclose a predetermined layout of packet, but fails to disclose a list of clients or that such a list is restructured based on a state change of a client. Therefore, Hayashi does not disclose "wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes" as recited in claim 1.

Accordingly, it is respectfully submitted that combination of Ohta, Torikai, Mazzagatte et al., and Hayashi does not teach or suggest the invention as recited in claim 1.

Therefore, for all of the reasons discussed above, the combination of the teachings of Ohta, Torikai, Mazzagatte et al. and Hayashi does not suggest all the features of independent claim 1, and claim 1 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

Claims 2, 4-7 and 19-23 depend from claim 1 and therefore, patentably distinguish over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least the same reasons as discussed above with respect claim 1, as well as for the additional recitations therein.

For example, claim 2 recites "wherein the wireless Local Area Network printer and the at least one printing client operate within the IEEE 802.11b standard."

Ohta discusses "In general, except for the portable digital device 11, all of the above components of the remote printing system are connected physically as well as wirelessly to a cable network 15. One example of the wireless communication protocols is "BlueTooth." The portable digital devices 11 include a cellular phone, a note-size computer and a personal digital assistant (PDA). The portable digital device 11_1 is wirelessly connected to the network 15 via a wireless communication unit 11_1 and the access point 16."(see col. 4, lines 4-53 of Ohta).

However, nothing cited or found in Ohta discloses that the wireless communication protocol is IEEE 802.11b. Thus, Ohta fails to disclose "wherein the wireless Local Area Network printer and the at least one printing client operate within the IEEE 802.11b standard" as recited in claim 2. Similarly, nothing cited or found in Torikai, Mazzagatte et al., or Hayashi discloses this feature.

Accordingly, it is respectfully submitted that combination of Ohta, Torikai, Mazzagatte et al., and Hayashi does not teach or suggest the invention as recited in claim 2.

In addition, claim 4 recites "wherein the list of the at least one printing client denotes state of the at least one printing client in relation to the wireless Local Area Network printer and includes fields for at least one of synchronization and association."

The Office Action acknowledged that Ohta and Torikai fail to disclose this feature of claim 4. To compensate for this deficiency, the Office Action alleged that Mazzagatte et al. discloses this feature.

However, as discussed above, Mazzagatte et al. relates to an authenticated recipient, not an authenticated printing client. Furthermore, nothing cited or found in Mazzagatte et al. discloses a list of printing clients, much less that such a list "includes fields for at least one of synchronization and association" as recited by claim 4. Similarly, nothing cited or found in Torikai, Mazzagatte et al., or Hayashi discloses this feature.

Accordingly, it is respectfully submitted that combination of Ohta, Torikai, Mazzagatte et al., and Hayashi does not teach or suggest the invention as recited in claim 4.

Furthermore, claim 5 recites "The method according to claim 1, wherein the list of the at least one printing client includes fields specifying whether each printing client is allowed to associate with the wireless Local Area Network printer."

The Office Action acknowledged that Ohta and Torikai fail to disclose this feature of claim 5. To compensate for this deficiency of Ohta and Torikai, the Office Action alleged that Mazzagatte et al. discloses this feature.

However, the cited portion of Mazzagatte et al. merely states "as shown in FIG. 5, one or more sending nodes 510 such as computer 10, a print server 540 such as server 40, and at least one printing device 550 such as printer 50, communicate via a network 500" (see col. 11, lines 52-55 of Mazzagatte et al.). Applicant submits that merely associating one or more devices via a network does not imply a list of such devices or that such a list inherently includes any particular fields. The Office Action does not articulate any reasoning for why such features would be appreciated by one of ordinary skill in the art from the cited portions of Mazzagatte et al.

Furthermore, nothing cited or found elsewhere in Mazzagatte et al. discloses "the list of the at least one printing client" much less that such a list "includes fields specifying whether each printing client is allowed to associate with the wireless Local Area Network printer" as recited by claim 5. Similarly, nothing cited or found in Hayashi discloses this feature.

Accordingly, it is respectfully submitted that combination of Ohta, Torikai, Mazzagatte et al., and Hayashi does not teach or suggest the invention as recited in claim 5.

In addition, claim 7 recites "The method according to claim 1, wherein the list of the at least one printing client includes fields denoting whether specific functions of the wireless Local Area Network printer are usable by the at least one printing client."

Ohta states "[t]he print stations 12A, 12B and 12C each have a corresponding wireless communication unit 12A1, 12B1 or 12C1 to wirelessly as well as directly via the cable network 15 communicate with the portable digital device 11" (see col. 4, lines 55-59 of Ohta). Applicant submits that merely connecting one or more devices via a network does not imply a list of such devices or that such a list inherently includes any particular fields. The Office Action does not articulate any reasoning for why such features would be appreciated by one of ordinary skill in the art from the cited portions of Ohta.

Furthermore, nothing cited or found elsewhere in Ohta discloses "the list of the at least one printing client" much less that such a list "includes fields denoting whether specific functions of the wireless Local Area Network printer are usable by the at least one printing client" as recited by claim 7. Similarly, nothing cited or found in Torikai, Mazzagatte et al., or Hayashi discloses this feature.

Accordingly, it is respectfully submitted that combination of Ohta, Torikai, Mazzagatte et al., and Hayashi does not teach or suggest the invention as recited in claim 7.

Claim 9 has been amended similar with claim 1.

In addition, claim 9 recites

> an extraction unit to extract information from a Media Access Control frame of the at least one printing client that is associated with a Basic Service Set, which includes the wireless LAN printer, the extracted information being information specifying whether the at least one printing client is authenticated to receive services of the wireless LAN printer;

and

> a management unit to manage printing operations of the at least one printing client according to the list by permitting only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer,

> wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes,

and therefore, claim 9 patentably distinguishes over Ohta, Torikai, Mazzagatte et al., and Hayashi for at least reasons similar to those discussed above with respect to claim 1.

Claims 10, 12-15, 17, 18, 25-31, 35-38 and 41 depend from claim 9 and therefore, patentably distinguish over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least the same reasons as discussed above with respect claim 9, as well as for the additional recitations therein.

For example, claim 10 recites "wherein the wireless Local Area Network printer and the at least one printing client operate within the IEEE 802.11b standard" and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least reasons similar to those discussed above with respect to claim 2.

Furthermore, claim 12 recites "wherein the list denotes a state of the at least one printing client in relation to the wireless Local Area Network printer and includes fields for at least one of synchronization and association" and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least reasons similar to those discussed above with respect to claim 4.

In addition, claim 13 recites "wherein the list of the at least one printing client includes fields specifying whether each printing client is allowed to associate with the wireless Local Area Network printer" and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least reasons similar to those discussed above with respect to claim 5.

Furthermore, claim 15 recites "wherein the list of the at least one printing client includes fields denoting whether specific functions of the wireless Local Area Network printer are usable by the at least one printing client" and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least reasons similar to those discussed above with respect to claim 7.

Claim 33 has been amended similar with claim 1.

In addition, claim 33 recites

> wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes,

and therefore, claim 33 patentably distinguishes over Ohta, Torikai, Mazzagatte et al., and Hayashi for at least reasons similar to those discussed above with respect to claim 1.

Claim 34 depends from claim 33 and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least the same reasons as discussed above with respect claim 33, as well as for the additional recitations therein.

Claim 39 has been amended similar with claim 1.

In addition, claim 39 recites

> extracting information from a Media Access Control frame of the at least one printing client, the extracted information being information specifying whether the at least one printing client is authenticated to receive services of the wireless LAN printer;

and

> managing printing operations of the at least one printing client according to the list by permitting only printing clients authenticated to receive services of the wireless LAN printer to associate with the wireless LAN printer,
>
> wherein the list of the at least one printing client is restructured in real time according to a beacon signal, and the list is updated when a state of the at least one printing client changes

and therefore, claim 39 patentably distinguishes over Ohta, Torikai, Mazzagatte et al., and Hayashi for at least reasons similar to those discussed above with respect to claim 1.

Claim 40 depends from claim 39 and therefore, patentably distinguishes over Ohta, Torikai, Mazzagatte et al. and Hayashi for at least the same reasons as discussed above with respect claim 39, as well as for the additional recitations therein.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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